

This presentation premiered at WaterSmart Innovations

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Utilizing Community Based Social Marketing to Reduce Outdoor Water Use



Research • Social Marketing • Results

October 5, 2011

Presented by:
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Presentation Goals

- Relevance of Behavior Change
- Alternative to Traditional Marketing
- Define Steps
- Applied Example
 - Outdoor Water Use by Local Businesses

Water Scarcity

□ Growing recognition of the need for action

- Population Growth & Urbanization
- Pollution
- Climate Change

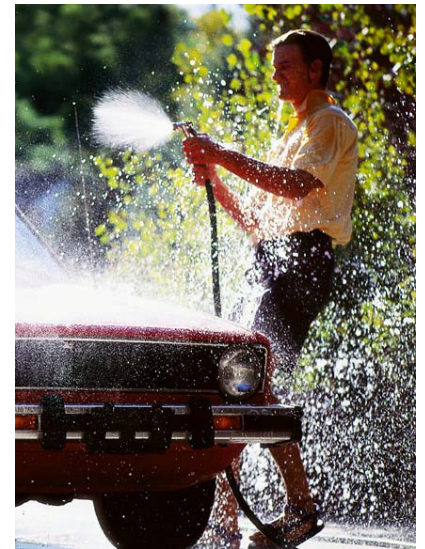


□ Technology and Policy Solutions

- Technical, economic, institutional, societal obstacles
- Time to penetrate markets, implement policies
- Some technologies only effective if people *use* them

Reducing Water Use = Behavior Change

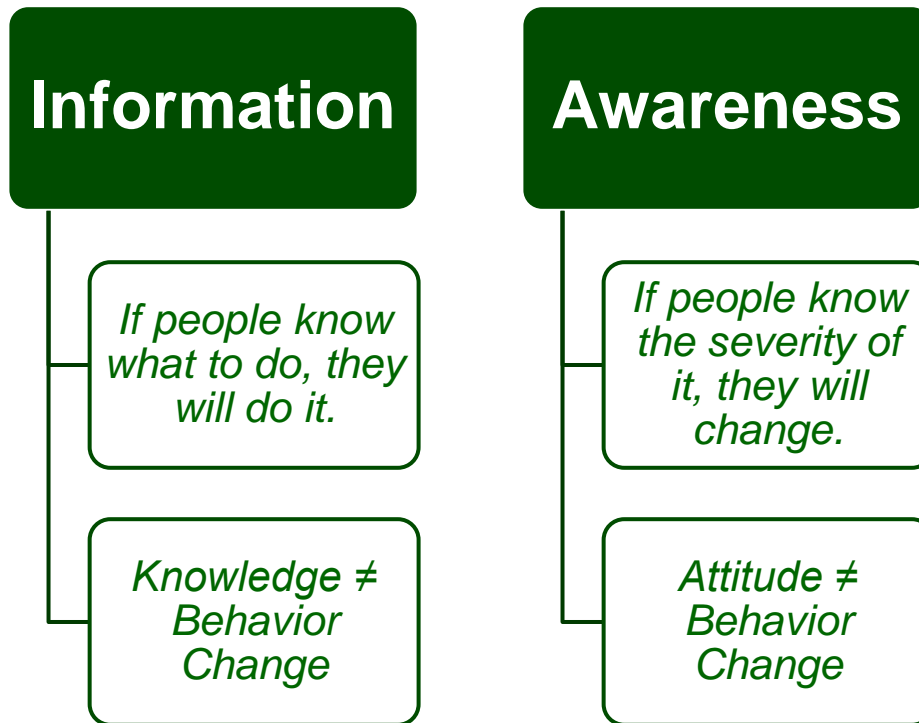
- **Diverse Set of Behaviors Affect Water Use**
 - Vary in context and frequency
 - **One-time** (e.g., install water efficient toilets)
 - **Repetitive** (e.g., showering habits)
 - Vary in cost, difficulty, and other obstacles
 - **Internal barriers** (e.g., knowledge)
 - **External barriers** (e.g., cost)



So how do we change behavior?



Traditional Approach



Beyond Brochures

- ❑ **Behavior change requires a different approach**
 - Process not a product
 - Beyond brochures, billboards, brands
- ❑ **Community-Based Social Marketing (CBSM)**
 - Origins in 100 years of social science
 - Research-driven
 - Community-based
 - Removes barriers
 - Outcomes (behavior change) not Outputs (# of impressions)

Community-based social marketing

Select Behavior

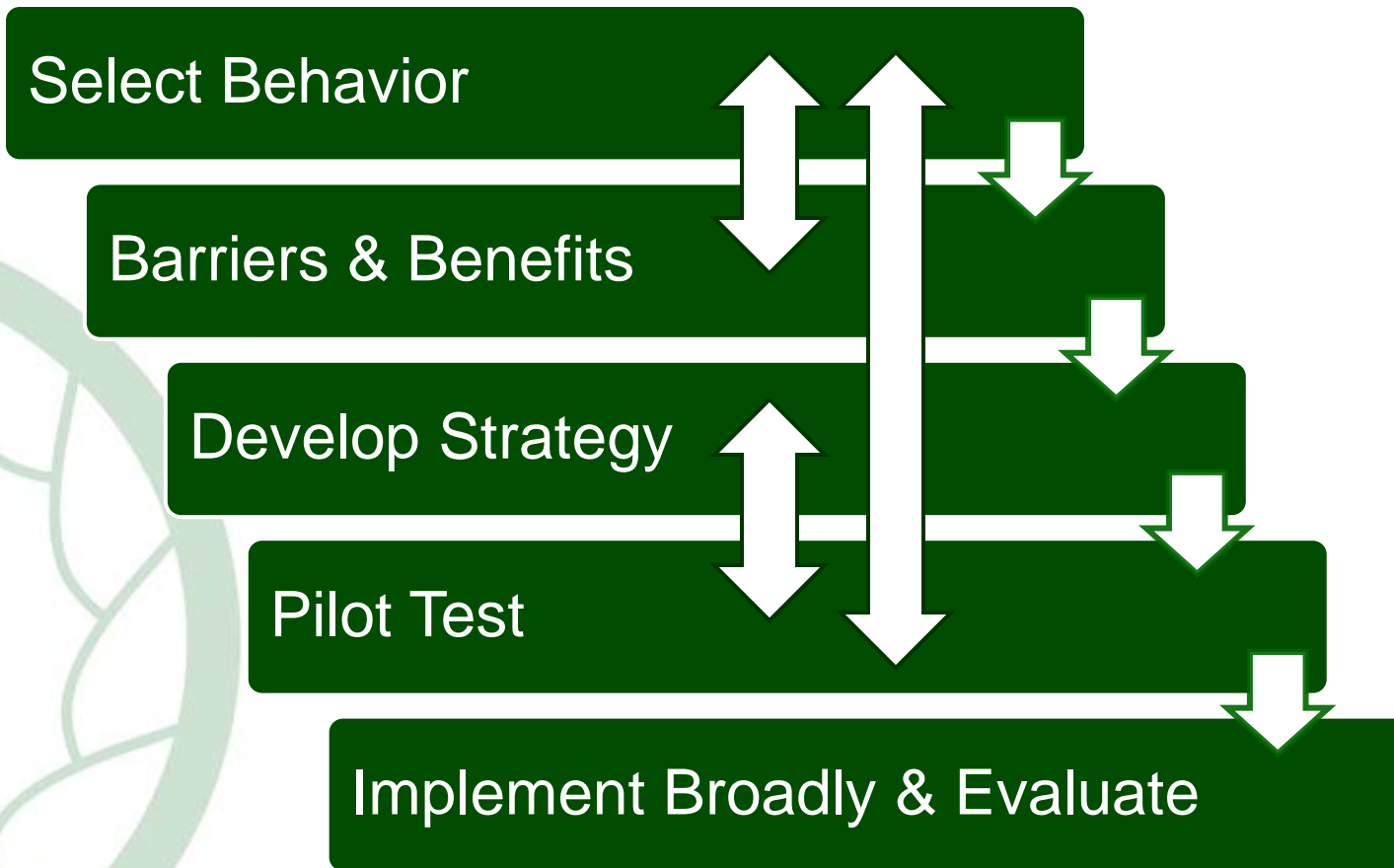
Barriers & Benefits

Develop Strategy

Pilot Test

Implement Broadly & Evaluate

Data Driven at Every Step



Effective Tools of Behavior Change

Commitment

Social Norms

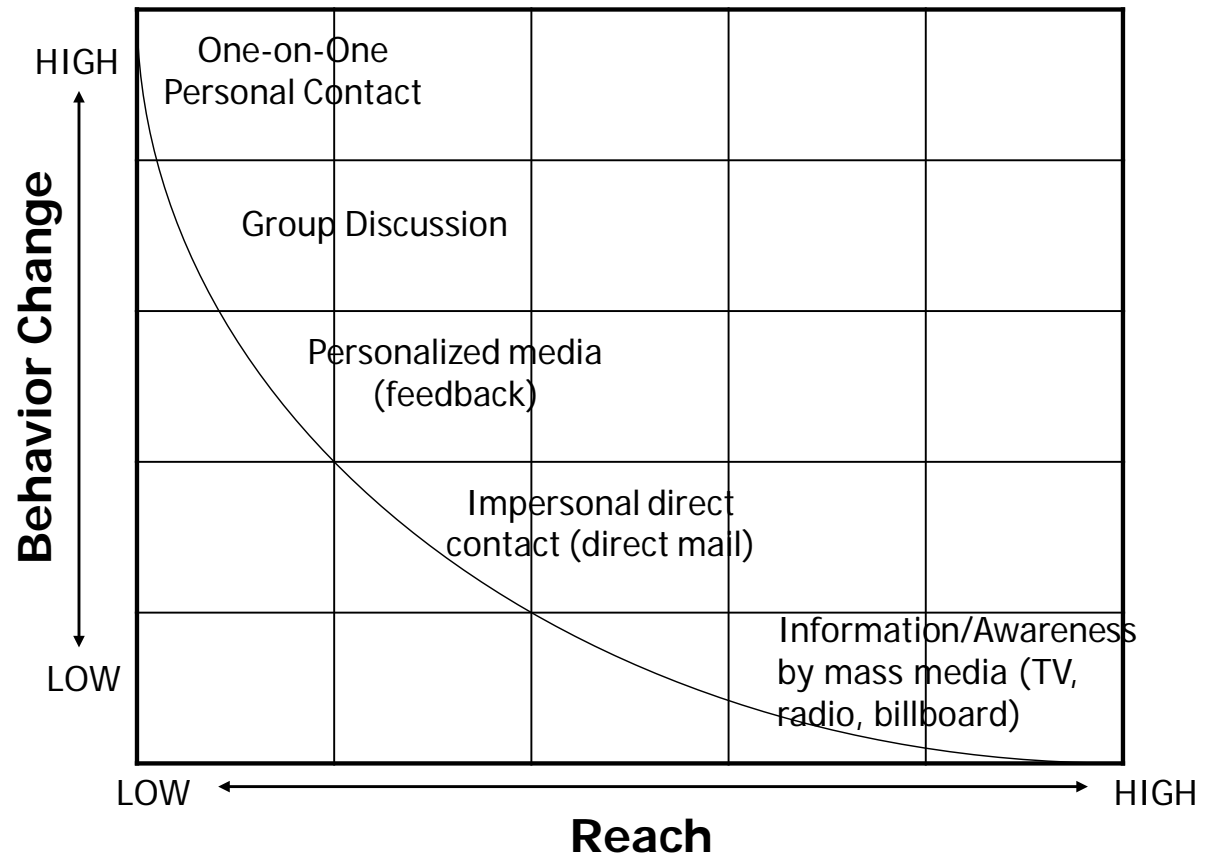
Social Diffusion

Prompts

Persuasive
Language

Vivid
Communications

Emphasizes Direct Contact



Graphic from: Schultz, P.W., & Tabanico, J. (2007). Community-based social marketing and behavior change. In A. Cabaniss (Ed.), *Handbook on Household Hazardous Waste*. Lanham, MD: Rowan and Littlefield.

Focus on Specific Behaviors

- ❑ **Are we focusing on behaviors that make sense?**
- ❑ **Informed choices**
 - What is desired outcome?
 - What sectors/audiences are linked with outcome?
 - What behaviors are linked with outcome?
 - Prioritize behaviors

Prioritizing Behaviors

Penetration

- Is there room to change?

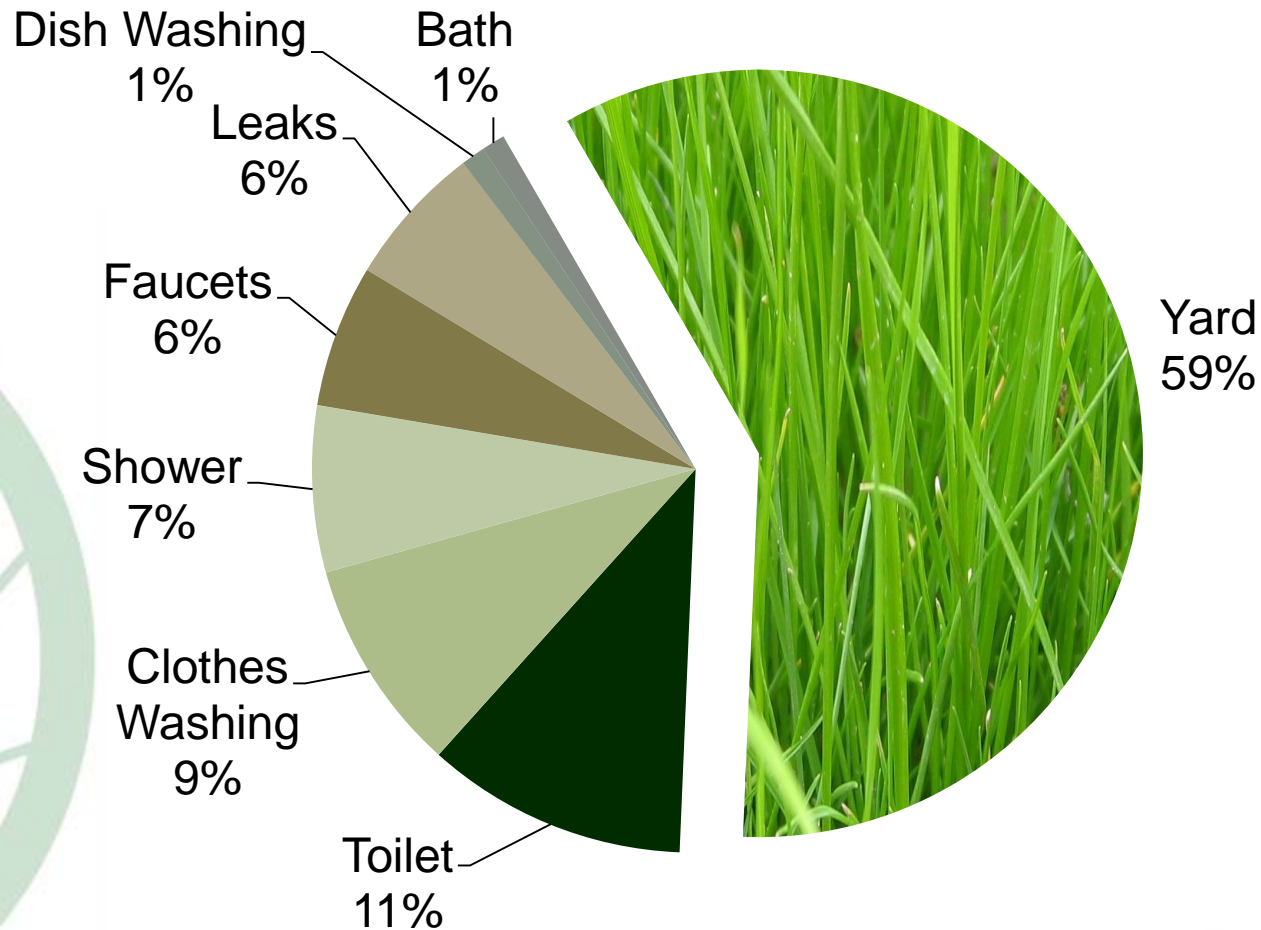
Probability

- How difficult is change?

Potential
Impact

- How much is change linked to outcome?

Residential Water Use



Source: American Water Works Association Research Foundation

Sample

Behavior	Impact 0-10	Probability 0-10	Penetration 0-100%	Weight
Collect and use rainwater for garden	7	4	.75	21.00
Replace section with drought tolerant plants	6	8	.40	19.20
Replace lawn with drought tolerant plants	8	3	.60	14.40
Fix leaks in irrigation systems	7	4	.50	14.00
Fix leaks in hoses	4	9	.25	9.00
Use lawn moisture sensors to control systems	5	2	.80	8.00

Note: Figures above are for demonstration only and not based on actual data. See McKenzie-Mohr, D. (2011) for more information.

Applied Example

Outdoor Water Use
La Jolla Shores, CA

Project Purpose

- Think Blue
 - City of San Diego Storm Water Department
 - Outreach program for residents and businesses
- Areas of Special Biological Significance
 - La Jolla Shores
- Coastal businesses and residents
 - High potential for impact





Step 1: Identify Target Behaviors

- Observations
 - Actual behavior
 - Evidence of behavior
- Systematic Protocol
 - Route
 - Timing
- Evaluation
 - Baseline
 - Matched Control



Observation Results

- 1,846 polluting instances in business area
 - Combined, outdoor water was most frequent

Rank	Evidence	# of Instances	Avg. per shift
1	Trash/Cigarette Butts	195	6.09
2	Water in Gutter	132	4.13
3	Wet Pavement	62	1.94
4	Weep Hole Draining	58	1.81
5	Water in Street	58	1.81
6	Puddle in Alley	57	1.78
7	Plant Material	56	1.75

Observation Results

- 1,127 polluting instances in residential area
 - Mostly litter, pet waste, plant material
 - Water from unknown sources

Rank	Evidence	# of Instances	Avg. per shift
1	Trash/Cigarette Butts	236	9.83
2	Plant Material	112	4.67
3	Standing Water	91	3.79
4	Wet Pavement	55	2.29
5	Pet Waste	53	2.21

Step 2: Identify Barriers

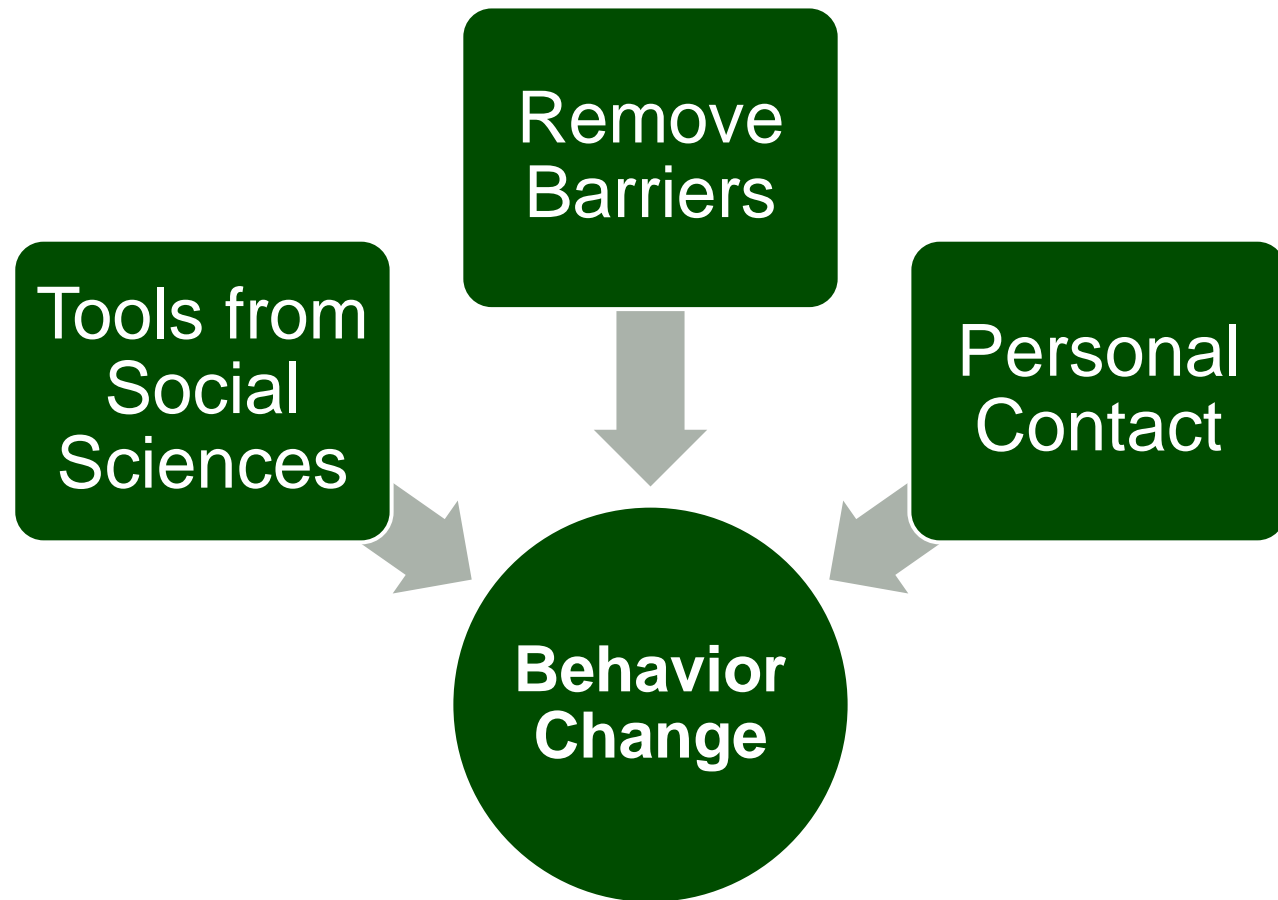
Residents: Mail Survey

- 64% response rate
 - **Not a Viable Target**
 - Doing the right thing
 - Concerned about water
 - Watering correctly
 - No car/boat washing
 - **Change in Focus**
 - Structural approach

Business: Personal Interviews

- 80% response rate
 - **Outdoor Water Use!**
 - Target behaviors
 - Lack of knowledge
 - Commitment: 75% agreed to future contact

Step 3: Develop Strategy



Step 3: Develop Strategy

- ❑ Community-based outreach
- ❑ Leverage NGO partnership
- ❑ One-on-one trainings
- ❑ Focused outreach on single behavior
 - 6 custom modules
 - Personalized to business type



Employee Training Module

MODULE F. Proper Plant Watering Techniques

LOCATE OUTDOOR PLANTS or LANDSCAPING (including planter boxes and potted plants)

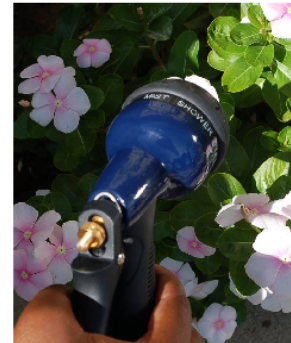
1. When watering potted plants or outdoor landscaping, use a trigger nozzle on your hose or, if you have only a few potted plants, use a watering can instead.
2. To prevent run-off (leakage) only add just enough water to adequately moisten the soil.
3. Use a “Moisture Meter” (demonstrate & provide, if requested) to determine if plants need water.

Reason: These methods minimize leakage and run-off from potted plants, and prevent pollutants from potentially entering the storm drain system.



Use a “Moisture Meter” to determine if plants need water.

Use a trigger nozzle to avoid wasting water and creating excess run-off.



Information

- **Purpose**
 - Address knowledge barrier
- **Elements**
 - Brochures
 - Hotline number
 - Poster
 - Map of storm drain system



Prompt/Incentive

□ Purpose

- Link behavior to object
- Reminder
- Structural barriers

□ Elements

- Watering meters
- Dust pans
- Spray nozzles



Vivid Positive Communications

□ Purpose

- Focus on what TO do
- Maximize impact

□ Elements

- Avoid “don’t” or “never”
- Descriptive language
- Demonstrate correct behavior



City of San Diego - Storm Water Best Management Practices (BMPs) for Businesses

When it rains or when excess water runs off landscaping and pavement onto our streets, it can flow into one of the City's storm drains. Many people believe these storm drains are part of the City's sewer system and anything that enters them is eventually treated. However, the storm drain system is NOT connected to the sewer system. Everything that washes into storm drains travels untreated to our creeks, rivers, bays, and ocean, polluting our beaches and harming fish and wildlife. You can help reduce pollution and improve water quality by using the following Best Management Practices (BMPs) as part of your business' daily clean up and maintenance routine.

Proper Cleaning Techniques:
Regularly sweep paved (concrete) areas. When washing with water, mop rather than spray and dispose of dirty water to the sewer system. Avoid hosing down soiled areas or using high-pressure washers. If power washing is necessary, collect or direct the wash water to landscaped areas for infiltration or to the sewer system.

Proper Washing Techniques:
Wash kitchen floor mats and entry/exit door mats in a mop sink so that wash water is captured and directed to the sewer system, or use an industrial dishwashing machine. If washing mats outside, use a trigger nozzle and do so in a landscaped area only.

Proper Trash Containment:
Place garbage in proper dumpsters and bins. Keep trash bins closed/covered to prevent trash from blowing offsite. Sweep trash areas and check for leaks twice a week. Keep liquids out of dumpsters. Dispose of non-toxic liquids in the sewer system. Always separate trash and recycle using proper bins.

Proper Hazardous Material Use & Disposal:
Store hazardous materials in sealed areas (such as containers or closed storage) to prevent leaks or spills. Dispose using authorized collection services. Identify the proper way to dispose of hazardous waste by calling the County Department of Environmental Health at 619-338-2231. Hazardous waste includes unused paint, solvents, oils, furniture polish and pesticides.

think BLUE SAN DIEGO

To report an illegal discharge, call the Storm Water Think Blue Hotline: 619-235-1000. Visit us on the web at: www.ThinkBlue.org

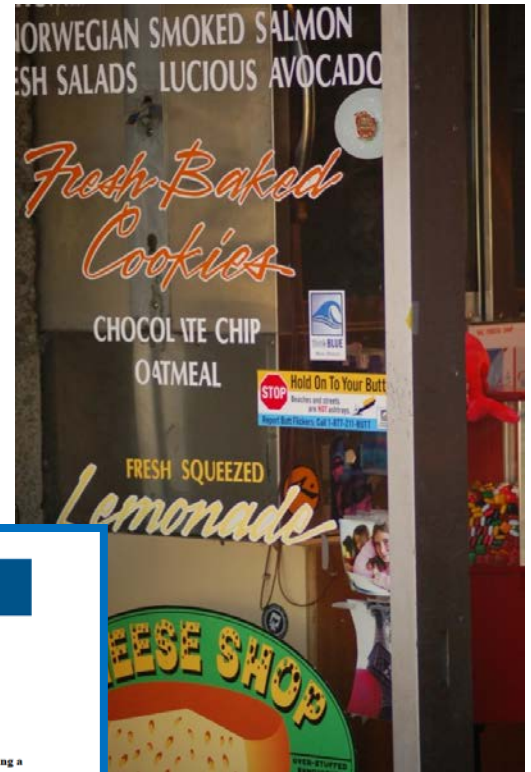
Commitment

□ Purpose

- Commitment to pollution prevention
- Personal commitment
- Public commitment

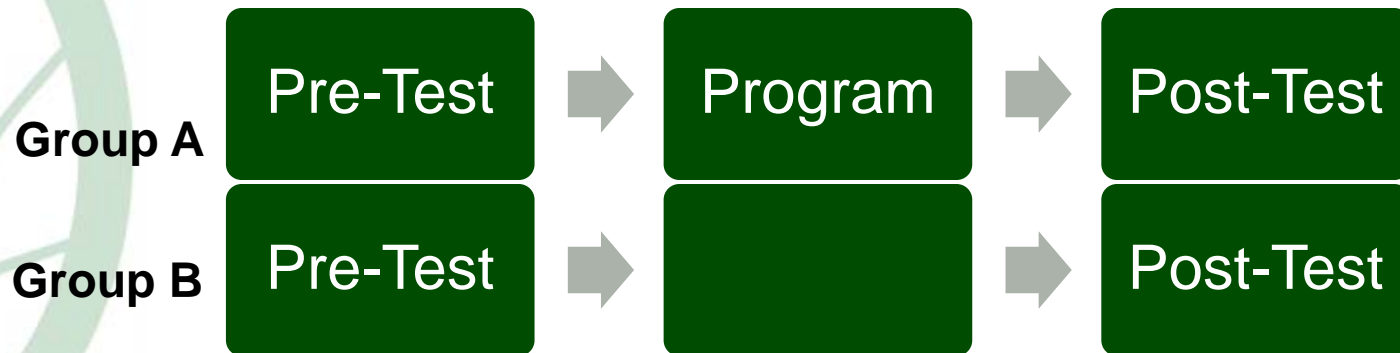
□ Elements

- Participation in demonstration
- Participation certificate
- Window sticker



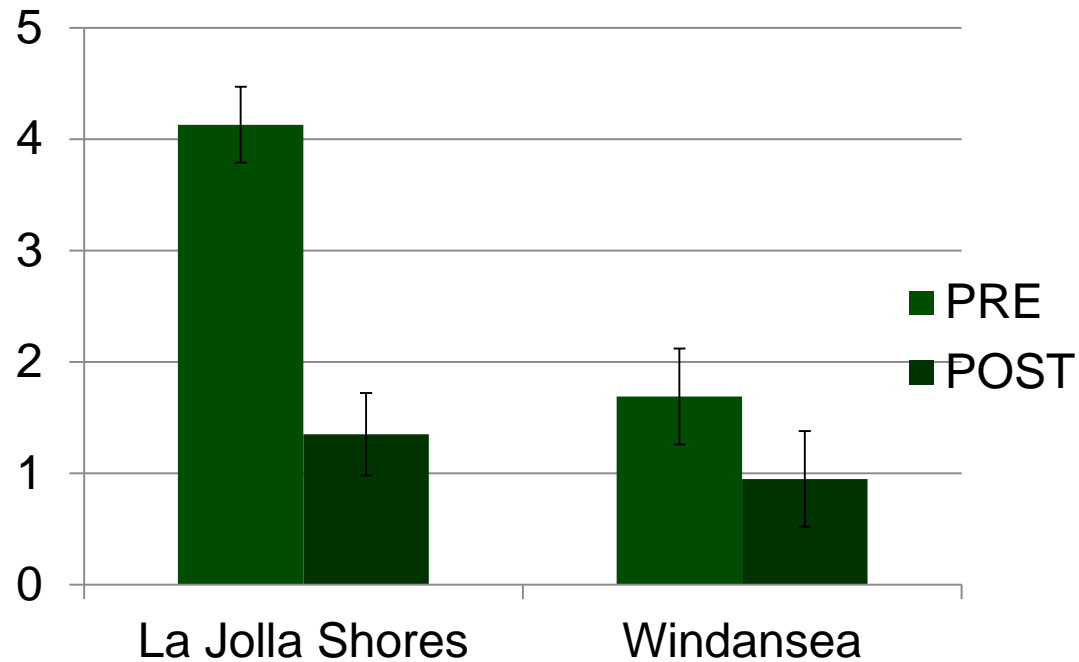
Step 4: Pilot the Strategy

- Preliminary data about efficacy of intervention
- Small sample (but out of the office)
- Refine, modify, re-pilot
- Cost-savings mechanism



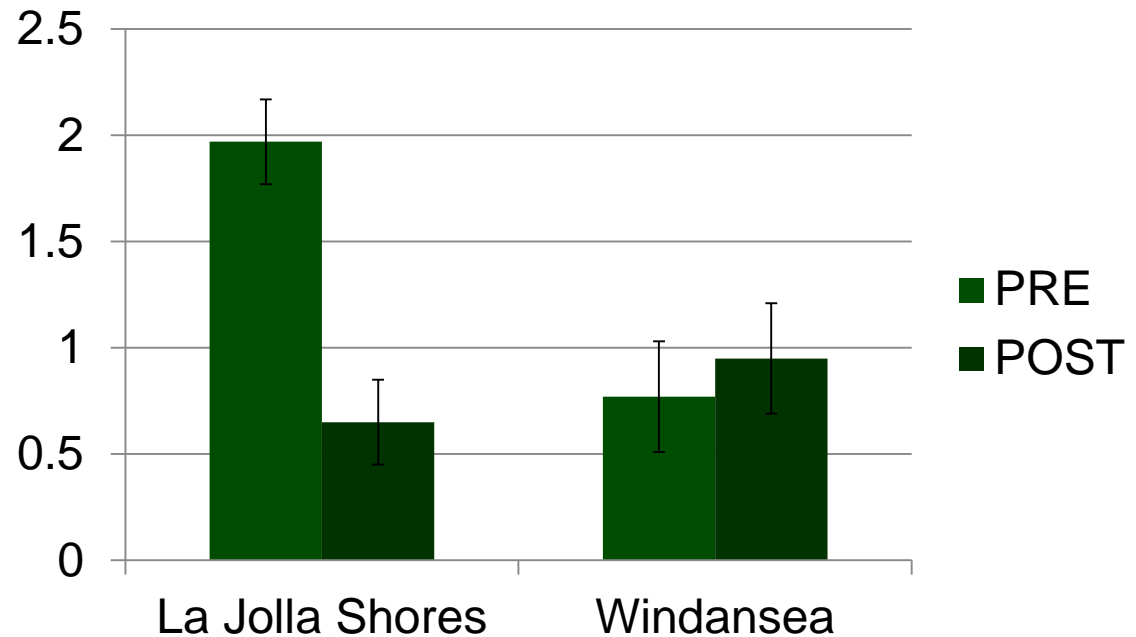
Results

67%
decrease
in water
in the
gutter.



Results

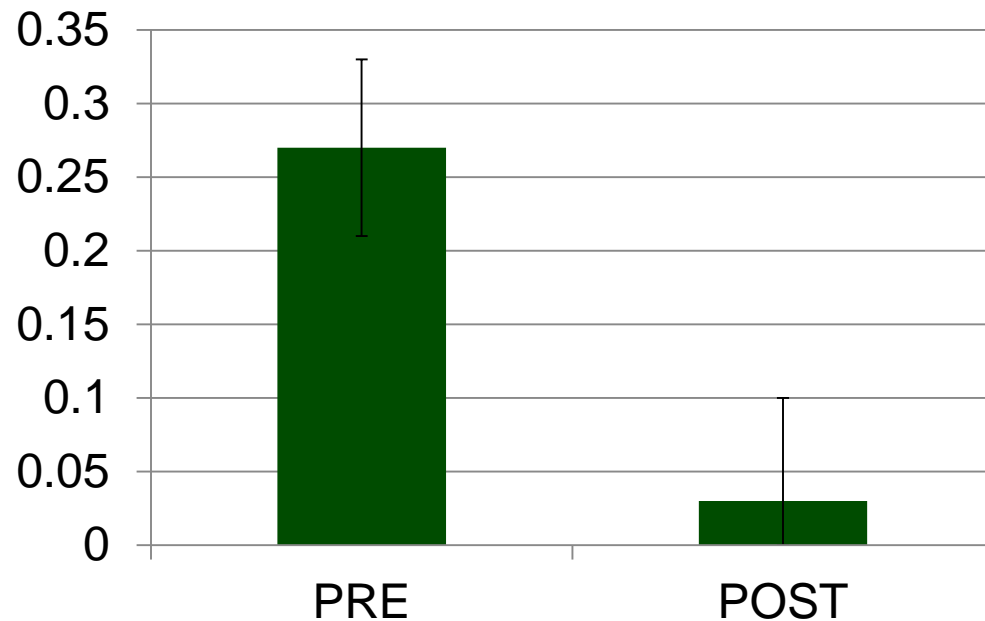
67%
decrease
in water
draining
at the
curb.



Results

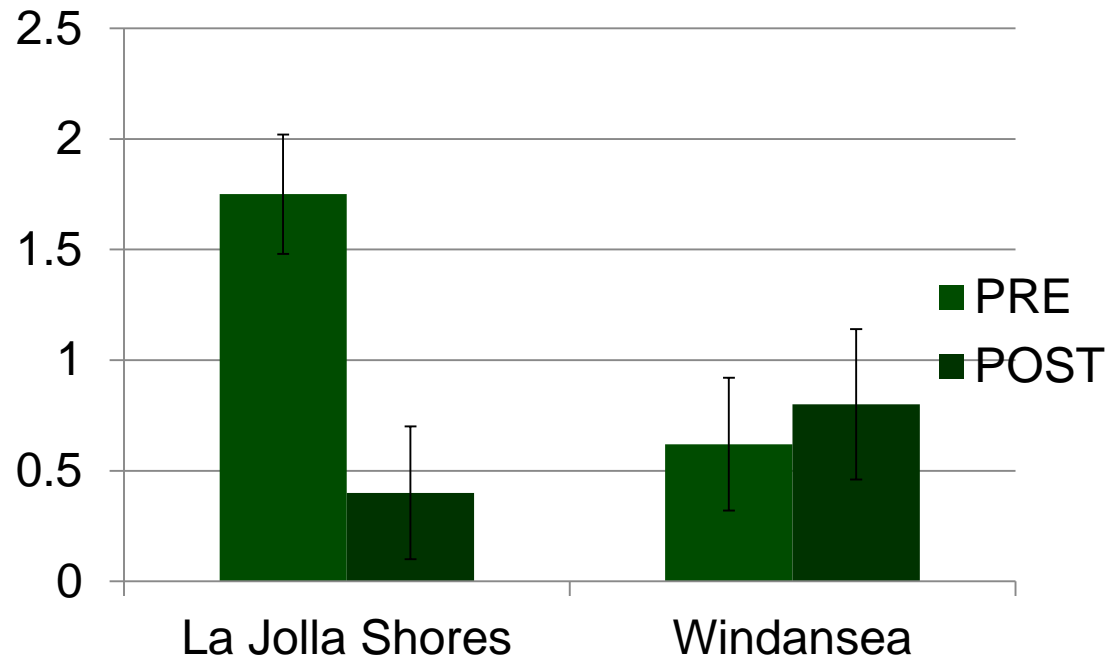
89% decrease in washing water sports equipment in La Jolla.

*No such businesses in control area.



Results

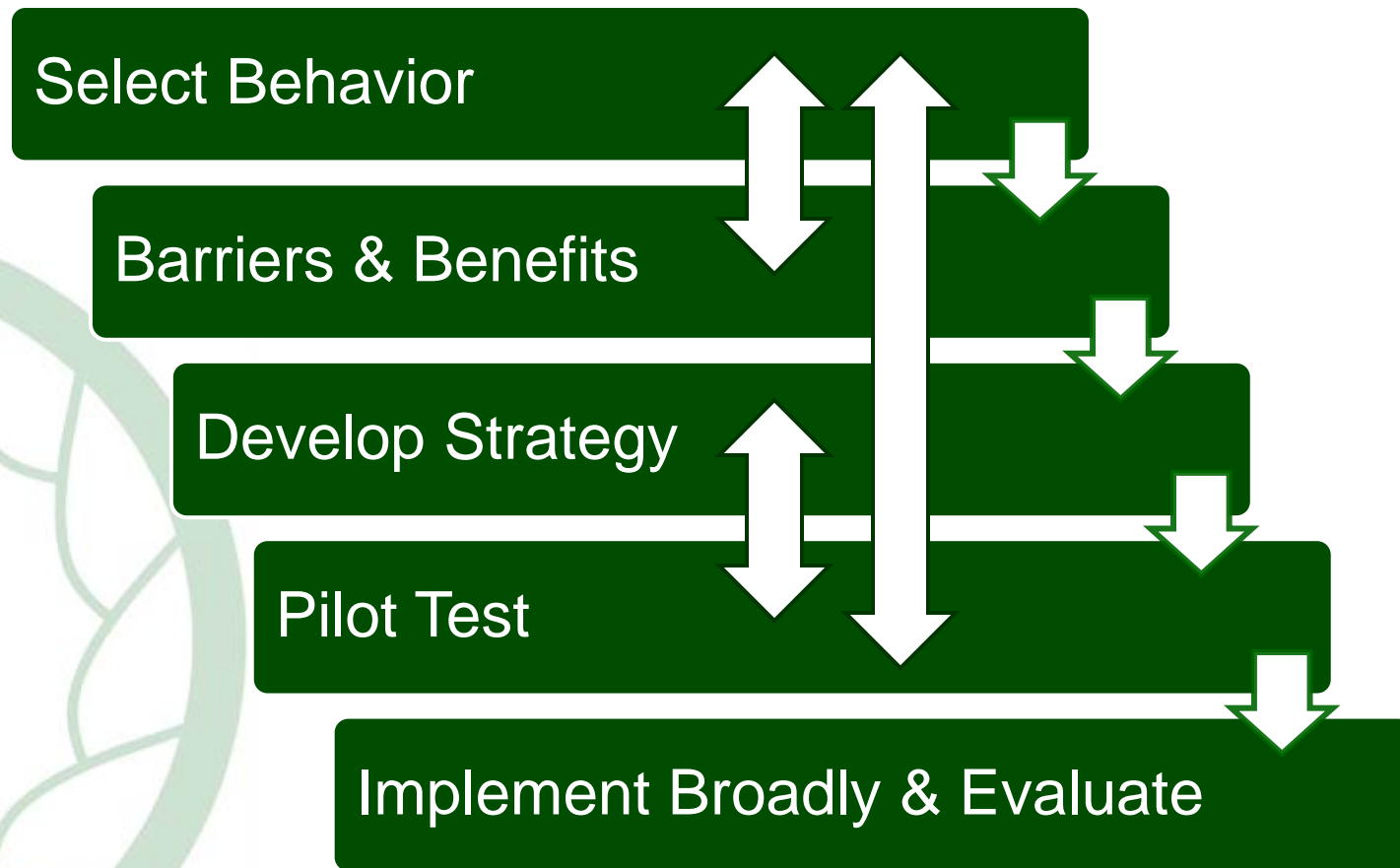
77%
decrease
in organic
material
in gutters
& streets.



Step 5: Implement Broadly

- New Business Outreach Model
 - Strength of focused campaign
 - Leverage community partnerships
 - Low cost
 - Built-in assessment

Turning Research Into Action





Research • Social Marketing • Results

Additional References

- Dietz, T., Gardner, G.T., Gilligan, J., Stern, P., & Vandenberg, M.P. (2009). Household actions can provide a behavioral wedge to rapidly reduce US carbon emissions. *Proceedings of the National Academy of Sciences*, 106, 18452-18456.
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- McKenzie-Mohr, D., Lee, N., Schultz, P. W., & Kotler, P. (2011). *Social marketing to protect the environment: What works*. Thousand Oaks, CA: Sage.
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